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ON THE

IDENTIFICATION OF THE SIGNS

OF THE

PERSIAN CUNEIFORM ALPHABET.

BY

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It is generally known to scholars, that the deciphering of the cuneiform, or arrow-headed, character has long been a problem of great interest among the orientalists of Europe. But, while the investigation of this subject has been going on, the field of research has been constantly becoming more extensive. When the study of the cuneiform character was begun, about fifty years ago, the inscriptions copied by Niebuhr at Persepolis, and published in his *Reisebeschreibung*, were the principal materials at command; and this continued to be the case until twelve years ago, when two inscriptions existing near Hamadân were given to the world. But more recently, the number of monuments in this character, which have been discovered and made known, has greatly increased, while, at the same time, there has been a multiplication of the recognized varieties of it. It was early perceived that there are different species of this character, for the Persepolitan tablets, which Niebuhr copied, show it in three special forms, side by side, and distinctive names for two of these were soon generally adopted. The resemblance of one of them to the character found on Babylonian cylinders and bricks, very naturally affixed to it the name of the Babylonian. Another, which until later was seen only at Persepolis, received, from that circumstance, the name of the Persian; and, as it has been found, up to the present time, only on monuments of Persian sovereigns, excepting one anomalous case, this designation, also, commends itself as appropriate. The third form, though clearly seen to be different from

either of the others, had no name of distinction until more recently, when, from its position between the other two, and from its being found only at Persepolis, it took the name of the Median. The propriety of this name, however, there are some grounds for questioning.

But several other varieties have now been recognized and named. A closer examination has shown the Babylonian cuneiform character of Persepolis to be a simplification of that which is seen on Babylonian cylinders and bricks, rather than identical with it; and the two kinds may be very well called, as they are, respectively, the Primitive and the Achæmenidan Babylonian, the name of the latter being taken from the dynasty on whose monuments it is found. So, the extensive discoveries of the traveller Schulz at Vân in ancient Armenia, followed by those of Botta and Layard at Khorsabad and Nimrûd, on the site of ancient Nineveh, have brought to light another variety requiring to be classed by itself, which, from its locality, and the traditionary connection of Vân with Semiramis, has taken the appropriate name of the Assyrian; and perhaps this, again, must be subdivided. There has been also discovered by Layard, in ancient Susiana, another variety of the cuneiform character, which is called, with precision sufficient for the present, the Elymæan, from the particular place where it was found.

Yet the orientalists of Europe have not been disheartened by this extension of the field to be investigated. On the contrary, the study of the cuneiform character, having begun with the Persian variety, on account of its being the simplest, has embraced, more recently, the Median, the Babylonian, and the Assyrian; and the examination to which these have been subjected is probably to lead, before long, to the deciphering of them all.

Meanwhile, the Persian cuneiform alphabet has been already deciphered; and we purpose now to communicate some of the results obtained, especially with regard to the value of the individual signs. The monuments, on which this alphabet is found, exist at or near Persepolis; on Mount Behistûn, the *Βαγίστανον ὄρος* of the Greeks, in ancient Media; on Mount Elwend, the *Ὀρόντης* of the Greeks, near Hamadân;

at Vân, in ancient Armenia; and in the vicinity of Suez; to which are to be added two vases, known as the vase of Count Caylus and the vase of the Treasury of St. Mark's, which are preserved at Paris and Venice; a Babylonian cylinder in the British Museum; and a monument near Terku, a city lying north of the Caucasian mountains. This last mentioned monument makes the exception to the exclusive appropriation of the Persian cuneiform alphabet to memorials of Persian kings, which has been already referred to; for it seems to be a monument of one of the Arsacides. But the inscription of Terku strangely intermingles different varieties of the cuneiform character, so that it can not properly be regarded as a specimen of either. That all these monuments, excepting the last mentioned, belong to Persian kings, has been proved by the discovery of the name of some one of the Achæmenides, or family of Cyrus, on each of them.

As to the method to be pursued in showing the value of the Persian cuneiform signs, it must be premised that, although their identification depends, ultimately, upon the successful reading of the entire series of inscriptions presenting them, on the supposition that they have been correctly valued, yet, since it is impracticable for us to exhibit here the evidence of their powers so fully as to identify each one in every word where it occurs, we shall limit ourselves to one or two words as examples of the power of each. It is also to be observed that, in thus bringing forward words for the sake of single signs which they contain, we shall necessarily assume the value of some signs, before they have been examined, trusting to evidence, afterwards to be given, that what we have assumed is true. But as we advance, we shall take constantly less for granted, before it is proved.

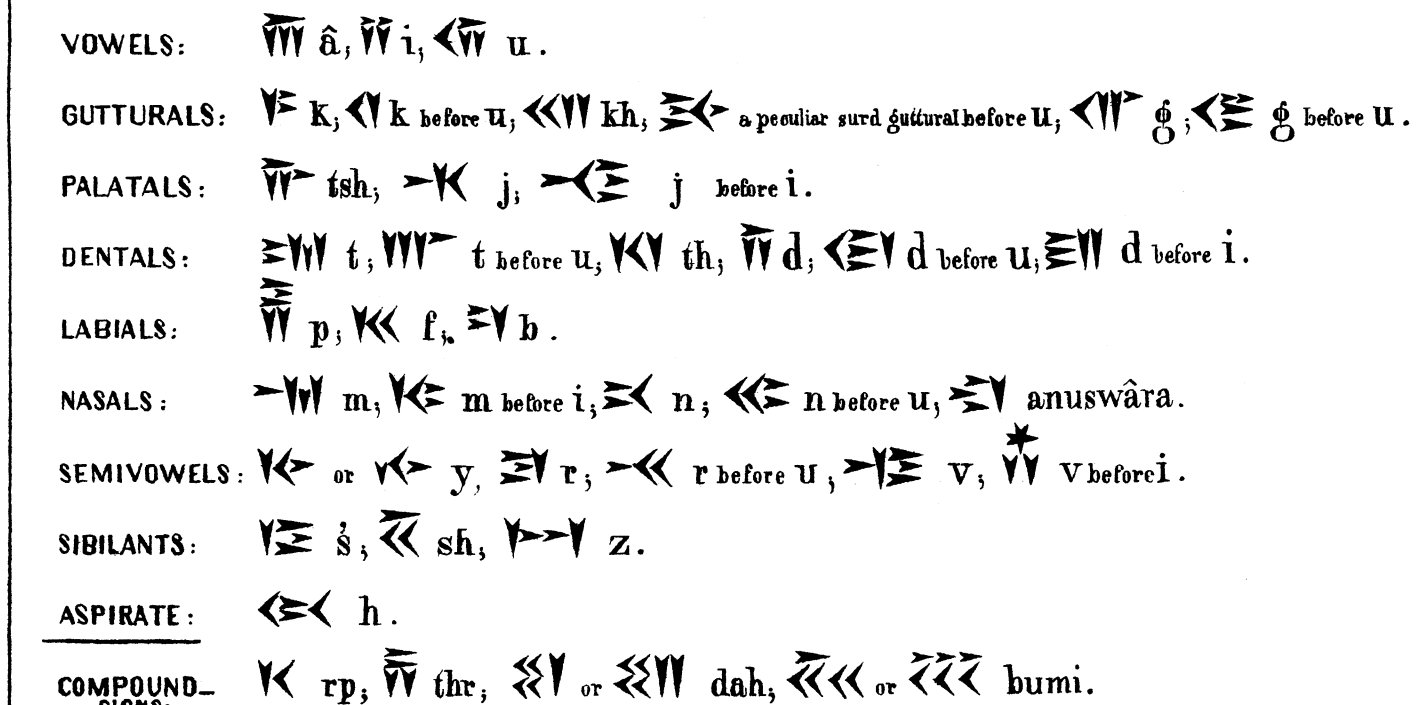
Some explanation may be desirable, also, as to the use which we shall make of Sanskrit and Zend words, by way of comparison. It is apparent that texts, in an unknown language and character, can be made out only by the aid of parallel texts which are intelligible; or by means of words, taken from some language, or languages, known to be allied to that given in the yet undeciphered alphabet, which are used as tests of the phonetic powers and grammatical forms to be ascertained,—some independent

ground for the identification of a few of the unknown signs having been previously established. In the case before us, there were no parallel texts to illustrate the cuneiform; but a foundation for discovery was laid by Grotefend, in the conjectural reading of the names of Darius and Xerxes, in certain groups of signs. Yet there would have been no progress beyond conjecture, had not the Sanskrit and Zend languages been consulted; and it was certainly reasonable to expect light from these sources, since the Zend was known as an ancient religious language of Persia, and the Sanskrit as very nearly akin to it. Words, therefore, which are cited as examples of the value of a Persian cuneiform sign, should be shown to have their equivalents, either radical alone, or grammatical as well as radical, in one or the other, or in both of these languages.*

We have been led to the following views of the alphabetical system of the Achæmenidan Persian, chiefly, by publications of Professor Lassen of Bonn, Professor Burnouf of Paris, and Major Rawlinson, British Resident at Baghdâd; yet no authority has been implicitly followed, but we have rather aimed to make a critical digest of what is contained in the most important of the works relating to the subject, hitherto published. It is needless to enumerate all these works, here, as a sketch of the progress of the study of the cuneiform character was given in the last Number of this Journal, and as Rawlinson's Introduction to his Memoir on the inscription of Behistûn, which may be easily referred to, gives the details. But the following, not having been noticed in either place, may here be mentioned, viz: *Beiträge zur Erklärung der Persischen Keilinschriften, von Adolph Holtzmann.* Erstes Heft. Carlsruhe: 1845; *Die Grabschrift des Darius zu Nakschi Rustam, erläutert von Dr. Ferd. Hitzig.* Zürich: 1847; *Die Persischen Keilinschriften mit Uebersetzung und Glossar, von Theodor Benfey.* Leipzig: 1847; and Oppert's *Lautsystem des Altpersischen.* The last named work we have not yet seen, but suppose to have been published in 1847–8.

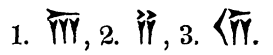
* In all our references to the Zend language, we shall rely chiefly upon the authority of Professor Burnouf, whose *Commentaire sur le Yaçna,* with Preliminary Observations on the Zend alphabet, is by far the richest store-house of instruction, respecting that language, which as yet has been opened to us.

PERSIAN CUNEIFORM ALPHABET.



Case & Green, Lith. Hartford, Conn.

We begin with the Vowel-signs, of which there are three in the Persian cuneiform alphabet, namely,



The first of these signs denotes the primitive *a*-sound of the Sanskrit and Zend; but without regard to quantity, for while, as a final and as a medial, it always represents the long *a*-sound, as: *brâtâ*, a brother, (nom.) S. *bhrâtâ* and Z. *brâtâ*,* id., yet, as an initial, it generally represents short *a*, as: *â'sbâraibish*, with horsemen, from *â'sbâra*, an adjective formed from *â'sba*, S. *a'swa* and Z. *a'spa*, a horse.

Our second vowel-sign denotes both the long and the short *i*-sound of the Sanskrit and Zend. For, as a medial, it is found to correspond to the long *î* of the Sanskrit, as: *jîvahyâ*, of life, S. *jîvasya*, id.; while, both as an initial and as a medial, it stands for the short *i* of that language and the Zend, as: *idâ*, here, S. *iha* and Z. *idha*, id.; and *pitâ*, the father, (nom.) S. *pitâ* and Z. *pita*, id. To suppose a short vowel in the Persian of our inscriptions, in cases where the analogy of the kindred languages would lead one to expect the long *i*-sound, without the appearance of any law requiring such abbreviation, would be arbitrary. Indeed, that supposition would tend to destroy the applicability of any evidence drawn from these languages, respecting the quantity expressed by our cuneiform vowel-signs.

Our third vowel-sign represents both the short and the long *u*-sound of the Sanskrit and Zend. For the short *u*, we find it as an initial, in *utâ*, also, Vêdic S. and Z. *uta*, id.; and as a medial, in *drauga*, lying, (nom.) from the root *drug*, S. *druh* for *drugh*, to plot against, and Z. *druj*, used as the name of evil spirits in the Zendavesta. For the long *û*, it appears as a medial, in *hushiya*, benevolent, (masc. nom. sing.) this word being made up of *hu*, well, S. *su*, id., and *ushiya*, from *usha*, will, Z. *u'sa* or *usa*, and S. *va'sa*, id.

We have said, that the first of our cuneiform vowel-signs represents the long *a*-sound alone, in the middle and at the end of words. This is connected with a principle of orthography, in which there is a remarkable agreement between the Achæ-

* This is the form of the Zend nominative from a ground-form in *ar*, when the conjunction *tsha* follows. See Bopp's *Vergleichende Grammatik*, p. 175.

menidan Persian and the Sanskrit, that short *a*, medial and final, is implied in the sign of the preceding consonant, and is not expressed by any separate sign. It follows, therefore, that long and short *a*-sounds, being medial, or final, are always distinguishable in our inscriptions. Nor is the indiscriminate use of a single sign, to denote both the long and the short *a*-sound, to be so understood as if there was no more definite appropriation of it, originally. For our first vowel-sign is used wherever etymology requires the long *a*-sound,* while *a* is denoted by it only at the beginning of words; so that its proper sound was undoubtedly long, and we must suppose that, as used for *a*, it was diverted from its original appropriation, on account of the want of a distinct sign for the short *a*-sound, when initial. So, our second and third vowel-signs, being the only representatives of the *i*-sound and *u*-sound, respectively, in the Persian cuneiform alphabet, probably denoted originally *i* and *u*, rather than *î* and *û*, although they are used indiscriminately for either the short, or the long sound of those vowels.†

It does not appear that *î* and *û* were in any way distinguished, in the orthography of our inscriptions, from the corresponding short vowels. Lassen has, indeed, suggested that final *iya* and *uva* may have been, sometimes, used to signify long *î* and long *û*; and Holtzmann takes the same view. But this suggestion was made in order to account for those terminations, in certain cases where the Sanskrit, or Zend, has short *i*, or *u*, the original short vowel being supposed to have been lengthened after the analogy of final *â* in the Achæmenidan Persian, substituted, as it sometimes is, for *a* in the kindred languages. Final *iya* and *uva*, however, corresponding to *i* and *u* in the Sanskrit and Zend, may always be explained on the general principle, presently to be illustrated, that the language of our inscriptions admitted no final vowel-sounds except those of *a* and *â*.

There are no proper diphthongs belonging to the Persian cuneiform alphabet; for wherever, in our inscriptions, either

* The termination *anâm*, in the place of the usual *ânâm* of the genitive plural, being evidently a corruption of the language itself, is no exception to this remark.

† Following the orthography of our inscriptions, in all words quoted from them, we use *a* to represent initial *a*-sounds, both long and short, and *i* and *u* for both the long and the short sound of those vowels.

a short or a long *a*-sound comes before *i*, or *u*, instead of a distinct character being employed, as in the Sanskrit, and in the Zend for *a*+*i* and *a*+*u*, to denote the blending of one vowel with another, each vowel is represented by itself, precisely as in all other cases where it occurs; for example, in: *maiya*, of me, to me, S. *mê*, id., and in *bâbirauva*, at Babylon, a locative singular in *auva*, Z. *ô* and S. *âu*, we have the signs of *i* and *u*, while the preceding medial short *a* is to be supplied as usual; so, in the proper name *tshishpâisha*, Teispes, (nom.) and the word *dahyâush*, the province, (nom.) the long *â* and the following *i*, and *u*, are denoted by their usual signs.* Nor have we any ground for supposing that the Achæmenidan Persian language was, with respect to this point, in advance of its orthography. But there is evidence to the contrary, which will be alluded to in another place.

We will here state certain laws respecting the combination of *i*, and *u*, with a following dissimilar vowel, clearly discoverable in the language of our inscriptions, which throw farther light upon its vowel-system. They are these:

1. The vowel *i* after a consonant, was changed before a dissimilar vowel into the corresponding semivowel *y*, while between this and the preceding consonant, if not an *h*, was inserted an *i*, on account of the repugnance of *y* to following any consonant except *h*, as: *âpiya*, even, S. *api*, id.; and *âmahya*, we were, S. *âsmahi*, id.

From this example, and numerous others which might be cited, it appears that the vowel *i* was inadmissible at the end of a word; so that where there would otherwise have been, according to the analogy of the Sanskrit, or Zend, a final *i* after a consonant, an *a* was affixed.

The *i* of *iy* substituted for *i* before a dissimilar vowel, after a consonant, is to be regarded as an euphonic insertion, because, while the prevailing usage of the Sanskrit and Zend leads us to regard the semivowel *y*, and not *iy*, as the representative of the original *i* before the dissimilar vowel, there evidently was, in the language of our inscriptions, a principle of euphony which required that the semivowel *y*

* In the middle of Zend words, vowels which might have blended together in a diphthong, frequently followed one another without coalescing.

should be separated from a preceding consonant by the vowel *i*. For this vowel was inserted between an *original y* and a preceding consonant, as: *martiyam*, mankind, (acc.) from *martiya*, S. *martya*, a man; unless the consonant preceding was *h*, which could unite with *y* without the intervention of a vowel, as: *âhyâyâ*, from *âhyâ*, of this, (fem.) S. *asyâs*, perhaps from *asyâ*, id. We find, however, another reading for this word, namely, *âhiyâyâ*, which accords with the general rule.

2. The vowel *i* after a vowel, when final in the Sanskrit, or Zend, was changed, before a dissimilar vowel, into *iy*, as: *âuramazdâiya*, to Ormuzd, a word formed from *âuramazdâ* by adding *ai*, equivalent to S. and Z. *ê* the sign of the dative case, and affixing an *a* to this termination, on account of the inadmissibility of final *i*. If we were to suppose the semivowel *y* to represent, here, the *i* of the inflection before the affixed *a*, there would be no apparent ground for the insertion of an *i* before it.

3. The vowel *i* after a vowel, being a medial, was changed, before a dissimilar vowel, into the corresponding semivowel, as: *khshâya* in *khshâyathiya*, the king, (nom.) formed from the root *khshi*, to rule, S. *kshi*, id., by adding the suffix *a*, which converted the root to *khshâi*, according to Sanskrit analogy.

The vowel *u*, before a dissimilar vowel, was subject to the same changes as *i*, in the several cases here enumerated.

1. Following a consonant, *u* before a dissimilar vowel was changed into its semivowel, between which and any preceding consonant an euphonic *u* was inserted, as: *dahyaushuvâ*, in the provinces, a locative plural corresponding to the Sanskrit form in *su*.

Final *u*, like final *i*, seems not to have been admissible in the language of our inscriptions; so that where the analogy of the Sanskrit, or Zend, would suggest its occurrence, an *a* was affixed.*

The *u* of *uv*, in such cases as *shuvâ* for the termination *su* of the Sanskrit, is to be referred to euphony for a reason similar to that which we have assigned for considering as euphonic the *i* of *iy* before a dissimilar vowel; since the

* The final *â*, in the word *dahyaushuvâ*, came by lengthening an original *a*.

language of our inscriptions invariably interposed *u* between an *original* semivowel of *u* and a preceding consonant, as: *huva*, he, Z. *hva* or *qa*, and S. *swa*, self, while the analogy of the Sanskrit and Zend leads us to regard the semivowel *v*, and not *uv*, as the representative of the original *u* before a dissimilar vowel.

2. The vowel *u* after a vowel, when, according to Sanskrit or Zend analogy, it would have been final, was changed, before a dissimilar vowel, into *uv*, as: *margauva*, in Margiana, a word of which the termination, *auva*, is equivalent to that of the locative singular from a ground-form in *u* of the Zend, namely, *ô*.

3. The vowel *u* following a vowel, being a medial, was changed, before a dissimilar vowel, into the corresponding semivowel, as: *dahyâva*, a nominative plural in *a*, S. *as*, from *dahyu*, a province, here amplified to *dahyâu*, as the Sanskrit ground-form *dasyu*, in the same case, became *dasyô*.

Compared with the Sanskrit and Zend vowel-systems, that of the language of our inscriptions shows us points of contrast, as well as of coincidence. A passing notice of the mutual relations of these several vowel-systems may not be out of place, in this connection, although the subject will be farther developed, when we have gone through with the examination of the signs of our cuneiform alphabet.

It may, then, be affirmed that the vowel-system of the Achæmenidan Persian was of a more primitive type than either that of the Zend, or that of the Sanskrit, even comparing it with the latter as exhibited in the Vêdas, where there appears something of the fluctuation of the period in the history of a language which precedes the fixed determination of its laws. The higher antiquity of the vowel-system of the Achæmenidan Persian is proved, relatively to the Zend, by its retaining all the primitive vowel-sounds in their original purity, while in the Zend an *a* of the Sanskrit frequently passed into *ĕ*. The same thing is shown, with reference to the Sanskrit as well as the Zend, by the presence of true diphthongs in these languages, though less frequent in the latter than in the former, which were wanting in the language of our inscriptions. In some important particulars of its

vowel-system, however, the Achæmenidan Persian seems to have been as fully developed as either of the other languages. For instance, the substitution of the semivowels *y* and *v* for *i* and *u*, before dissimilar vowels, is a law of equally extensive application in them all. So, with respect to the blending into one long vowel, of two short *a*-sounds coming together, which is rarely exemplified in the Zend, but is constant in the Sanskrit, the language of our inscriptions follows the example of the latter. If, as we suppose, this language had the sounds of long *î* and long *û*, though without special signs to distinguish them, it probably resembled the Sanskrit farther, in forming out of two concurrent *i*'s, or *u*'s, the corresponding long sound, which is, also, opposed to the rule of the Zend.

It should be added here, that vowels performed a less important part, in either the Sanskrit, or the Zend, than in the language of our inscriptions, inasmuch as the latter rejected all terminal consonants, excepting two, and of these one may not have been distinctly articulated.

We must now proceed to identify the Consonant-signs of the Persian cuneiform alphabet, and it will be convenient to consider them in several distinct classes, as follows:

I. The *guttural-signs*, namely,

1. , 2. , 3. , 4. , 5. , 6. ,

of which the first four are surds, and the last two, sonants.

The first of these signs represents the *k* of the Sanskrit and Zend, as: *kartam*, made, done, (neut. nom. sing.) S. *kartam* and Z. *kĕrĕtĕm*, id. But its use was restricted, for our cuneiform alphabet differed from that of the Sanskrit, or the Zend, in providing a special sign to denote the unaspirated surd guttural *k* before the vowel *u*.

The second in this series is the sign just alluded to, a proof of the special appropriation of which is found in *â*  *unavam*, I did, compared with  *artam*, done, both of these words being derived from the same root, *kar*, S. *krĭ*, to make, to do. But what was the peculiar articulation of *k* before *u*, which required this orthographic distinction, is uncertain.

The third sign here given represents the *kh* of the Sanskrit and Zend alphabets; for it is evidently the aspirate of *k*, since it stands for the Sanskrit *k* according to a law, also in force in the Zend, which required the aspiration of a surd guttural, when followed by a nasal, liquid, or sibilant, as: *tshithratakhma*, (nom.) a compound used as a proper name, of which the latter constituent may be derived from the root *tak*, S. *tak*, to sustain; *tshakhriyâ*, he would make, from the root *kar;* and *khshâyathiya*, from the root *khshi*, S. *kshi*. But it does not always denote *kh* substituted for Sanskrit *k* by this euphonic law, since we find the same sign also before vowels, as: *hakhâmanishiya*, an Achæmenide, (nom.) and *tigrakhudâ*, (nom. plur.) the name of a Scythian tribe. Nor was the law of euphony, just referred to, quite precise in its operation, for we find a Sanskrit *k* to have been aspirated in the language of our inscriptions, sometimes, even before the dental *t*, as: *durukhtam*, not well (not truly) said, S. *duruktam*, id., unless the form of this word is to be explained as indicative of a deficiency of discrimination between the articulations of *k* and *kh*.

The fourth sign in this series denotes an articulation which was peculiar to the Achæmenidan Persian. There are only two known examples of it, of which the most decisive is given in a certain proper name, having this sign for its initial letter, which Lassen reads *chudrâ*, and supposes to have signified the Kurds, but which Rawlinson reads *mudrâ*, as a name of the Egyptians.

For the identification of this rare sign as an *m*, Rawlinson relies upon a statement of Stephen of Byzantium, that the Phœnician appellation of Egypt was Μύαρα,* while he maintains that the name in question, in our inscriptions, must mean Egyptians, because the name of a country, which varies from it only in form, occurs in a passage of the inscription of Behistûn, referring to the revolt of the feigned Smerdis under Cambyses, where he thinks it can only mean Egypt, as Herodotus says that the revolt of Smerdis took place while Cambyses was in that country. The passage is as follows:

"Says Darius the king: Cambyses by name, a son of Cyrus, of our race, was king here of old. Of that Camby-

* Rawlinson thinks this should be read Μῶδρα.

ses there was a brother named Bardiya (Smerdis), a brother of Cambyses by the same father and the same mother. Afterwards, Cambyses put to death that Smerdis. Afterwards, Cambyses proceeded to *Mudra*, (or, according to Lassen's reading, *Chudra*, that is, Kurdistân.)

Says Darius the king: Afterwards, there arose a certain man, a Magian, named Gaumâta; he deceived the State, saying: I am Smerdis, the son of Cyrus, the brother of Cambyses."

Now it is true that Herodotus does ascribe the usurpation of the feigned Smerdis, partly, to the absence of Cambyses, at the time, in Egypt; and this is certainly in favor of supposing Egypt to be the country to which the inscription of Behistûn informs us that Cambyses went, after the death of his real brother Smerdis. But, on the other hand, it is equally certain that, according to Herodotus, Cambyses was already in Egypt, when he heard the rumor of his brother's usurpation, which led him to resolve upon putting him to death; and that he sent from Egypt the agent whom he employed to destroy him. It is evident that the country to which, in the inscription of Behistûn, Cambyses is said to have gone after the death of his brother, can not be Egypt, consistently with the whole narrative of Herodotus, unless the inscription is supposed to refer to a departure of the king to Egypt, after having once returned from thence, in the interval between his real brother's death and the usurpation of the feigned Smerdis. Herodotus, however, gives us no intimation of this.

In view, therefore, of all that the Greek historian says of the events of Persian history here referred to, we are necessitated to find some other country than Egypt, under the name which Rawlinson reads *mudra* in the passage of the inscription of Behistûn which has been quoted; and there is nothing in the narrative of Herodotus against the supposition, that Kurdistân may have been the country intended. Indeed, Herodotus himself represents that Cambyses was in Syria, (τῆς Συρίης ἐν Ἀγβατάνοισι,) after the death of his brother, before the feigned Smerdis had completed his usurpation. A herald of the pretender, who had been despatched to Egypt, to claim for him the homage of the Per-

sian army there, is said to have met Cambyses at Agbatana in Syria.*

But we have a positive ground for reading, with an initial guttural, *chudra*, and *chudrâ* where the plural form is used to signify a people. For, in an enumeration of the tributaries of Darius which has been found at Persepolis, the *chudrâ*, (or *mudrâ*,) are introduced between the Assyrians and Armenia, while the general arrangement of names, there, is such that they must be looked for northward of Assyria. There is, therefore, scarcely room to doubt that the Kurds are the people here spoken of.

For these reasons, the alphabetical sign which has led us into this long digression, may be quite confidently classed as a guttural; and since of the two Greek forms of the name of the Kurds, Καρδοῦχοι and Γορδυαῖοι, the former, with an initial *K*, is said by Strabo to be the oldest, there seems to be some reason for regarding this as a surd, rather than a sonant. Its articulation, however, was one peculiar to the language of our inscriptions; for, being found only before *u*, it seems to have depended upon that vowel, while yet there is no indication of its having been merely an euphonic substitute for one of the other gutturals of the language.

Our fifth guttural-sign represents the *g* of the Sanskrit and Zend alphabets, as: *âgarbâyam*, I seized, from the root *garb*, Vêdic S. *gṛĭbh* and Z. *gĕrĕw*,† to seize. But its use was restricted, like that of the corresponding surd; for we find it only before the vowels *a*, *â* and *i*, while before *u* it has its substitute, denoting some unknown modification of its power.

The last in our series of cuneiform guttural-signs is this substitute for the preceding, denoting *g* before *u*. Its peculiarity is proved by the proper name *mar**ush*, (nom.) Margiana, of which the locative singular, *mar**auva*, presents the ordinary *g*.

* The passages of Herodotus which have been referred to, may be found in Book III. Sections 27–30 and 61–62, of Baehr's edition. The place called Agbatana in Syria was probably upon some declivity of Mt. Carmel. See Mannert's *Geographie d. Griechen u. Römer*. VI. 1. p. 353.

† According to Burnouf's view, Z. *w* from S. *bh* comes through the articulation *b* substituted for *bh*. The ordinary Sanskrit form of the root *gṛĭbh* is *gṛĭh* or *grah*, in which the aspirate alone is preserved.

Our cuneiform *g* sometimes stands for the aspirated sonant guttural of the Sanskrit, as: *gaushâ*, ears, (acc.) from the root *gush*, S. *ghush*, whence comes S. *ghôsha*, sound, and there is no evidence, derivable from its alphabet, that the language of our inscriptions distinguished the Sanskrit articulation *gh*. The Zend word, corresponding to the Sanskrit *ghôsha*, is *gaosha*, ear, also beginning with the unaspirated *g;* but this is a solitary example of *g* standing for Sanskrit *gh*, in the Zend. The Zend, having a *gh* of its own, reverses the case by very frequently putting this in the place of the Sanskrit *g*.

II. The *palatal-signs*, namely,

1. , 2. , 3. ,

of which the first is a surd, and the two latter are sonants.

The first of these signs denotes the *tsh* of the Sanskrit and Zend, as: *tsha*, and, S. and Z. *tsha*, id.; and *tshish*, any one, (nom.) S. *tshi* in *tshit*,-soever, and Z. *tshis*, any one, (nom.) But it is found only before the vowels *a*, *â* and *i*. There is no other sign, however, of the Persian cuneiform alphabet, which can be supposed to represent this palatal as articulated before *u*. It is indeed probable, that the language of our inscriptions did not admit the combination of any palatal with that vowel, since no one of this class of its consonant-signs has been found before *u*.

The last two of our palatal-signs differ from one another only with respect to the vowels with which they combine. This is shown by the orthography of the proper name *uva*  *a*, Susiana, compared with that of the adjective *uva*  *iya*, formed from it; and by the word *drau*  *ana*, a liar, (nom.) compared with another word *âduru* *iya*, he plotted, both being from the same root, *druj*, Z. *druj*, S. *druh*. How the articulation differed, accordingly as an *i* followed, or not, must be left undetermined. But both these signs may be substantially identified as equivalent in power to the *j* of the Sanskrit, for we find the word *âvajata*, put to death, from the root *jan*, S. *jan* substituted for *han*, to kill; and *jivahyâ*, a genitive singular from *jiva*, life, S. *jîva*, id. With the *j* of the Zend, also, the former of the two

signs here considered, that is, the one not appropriated to combination with the vowel *i*, may be seen to have a common power, as; *âjamiyâ*, let it come, from the root *jam*, Z. *jam* or *gam*, to go; and *âvajata*, the root of which, *jan*, is equivalent to Z. *jan*, substituted for *zan*, in the word *jata*, killed. The latter of these two signs, which is used only before *i*, might, without doubt, be identified, in the main, with the *j* of the Zend, as it has been already with the Sanskrit *j*, since the connection of the vowel *i* with its articulation belonged to the peculiar euphony of the language of our inscriptions. But the requisite examples are not at command.

There appear to be no signs of the Persian cuneiform alphabet, which represent the aspirated palatals of the Sanskrit. This indicates a special affinity between the language of our inscriptions and the Zend, for the latter did not recognize the aspirates of the palatal class of Sanskrit consonants.

III. The *dental-signs*, namely,

1. , 2. , 3. , 4. , 5. , 6. .

The first in this series is the *t* of the Sanskrit and Zend, as: *patiya*, or in composition *pati*, over against, S. *prati* and Z. *paiti*, id.; and *taumâ*, the race, (nom.) Z. *taokhma*, posterity, (nom.) But there is one root, *'stâ*, to stand, S. *sthâ*, id., in which it takes the place of the *th* of the Sanskrit; and it deserves to be mentioned that here, again, the language of our inscriptions is proved to have been especially akin to the Zend; for this same substitution of *t* for the Sanskrit *th*, occurs in the corresponding Zend root *'stâ*.

As among the guttural-signs of our cuneiform alphabet we have found one denoting *k* before *u*, so the class of consonant-signs now before us includes one appropriated to represent the unaspirated surd *t* in combination with the vowel *u*.

The second in our dental-series is the sign of this peculiar articulation. That it denotes only a modification of *t* before *u* is proved by the word  *uvam*, you, the nominative of the pronoun of the second person, of which the genitive or dative is  *aiya*.

Our third dental-sign standing often for an original *t* before *r*, as: *mi* 𐎹𐎼 *ra*, (voc.) O Mithra! S. *mitra*, O friend! as well as for *t* before *y*, if the suffix 𐎹𐎼 *iya* of the Achæmenidan Persian is the same as the Sanskrit *tya*, we may consider its articulation to have been equivalent to that of the *th* of the Zend, which was itself a substitute for the Sanskrit *t* before all semivowels, as well as before nasals, and is shown by Burnouf to have had a soft pronunciation, approaching to a sibilant. This identification has the more plausibility, as the cuneiform sign now in question sometimes stands for a Sanskrit sibilant, as: *thaḥ*, in *thâtiya* for *thahatiya*, he says, S. *'sans* or *'sas*, to speak. The third in our series of cuneiform dental-signs, therefore, although a *th*, is not the *th* of the Sanskrit. It appears, indeed, that this Sanskrit dental articulation was not expressed in the Persian cuneiform alphabet, unless it may have been represented by that dental-sign the exact value of which we have left uncertain. There are cases, however, where the cuneiform consonant-sign which we suppose to have the value of the soft *th* of the Zend, stands for the *th* of the Sanskrit, as: *ya* 𐎹𐎼 *â*, as, when, S. *yathâ*, as. But the Zend *th*, itself, was sometimes similarly employed, for *yathâ* in the Zend, with its soft *th*, corresponds to the Sanskrit *yathâ*, with hard *th*. In certain other cases, this sign stands for the Sanskrit *t*, where no law of euphony can be made to account for the substitution, and it must, therefore, be ascribed simply to the tendency of dentals to pass into sibilants.

We come now to the fourth and fifth signs in this series. The fourth is the *d* of the Sanskrit and Zend, as: *dahyâ-ush*, a nominative singular from the ground-form *dahyu*, S. *dasyu* and Z. *daqyu*, a province. It stands also for the *dh* of the Sanskrit and Zend, as: *badaka*, a subject, from *bada*, S. *bandha*, binding; and *idâ*, Z. *idha;* and the aspirated sonant dental *dh*, as well as *gh* and *jh* of the guttural and palatal classes of consonants, seem to have been unrepresented in our cuneiform alphabet; and therefore, so far as we can judge, were unrecognized in the Achæmenidan Persian language. This sign likewise takes the place of the *t* of

the Sanskrit, as: *udapatatâ*, he arose, from the root *pat* with the prefix *ud*, S. *ut*, to arise, which, however, is only an example of the transition of an original surd into a sonant. Again, it is sometimes used for the *h* of the Sanskrit, as: *idâ*, S. *iha;* but, in this case, both the *h* and *d* are without doubt derived from *dh*.* Our fourth dental-sign has been found, as yet, only before the vowel *a*.

Like the signs of the unaspirated surd and sonant gutturals *k* and *g*, and the unaspirated surd dental *t*, it had its substitute before the vowel *u*, which is the fifth sign in our dental-series. That this was appropriated to denote a modification of *d* before *u*, may be seen from  *urukhtam*, compared with  *raujana*, both these words being formed from the same root *druj*.

The last of our cuneiform dental-signs stands for *d* and *dh* of the Sanskrit, as: *ya*  *iya*, if, S. *yadi*, id.; and *ja* *i-ya*, do you put to death, where *iya* is a suffix equivalent to the imperative-ending *dhi* of the Vêdic Sanskrit, which in the later Sanskrit became *hi* after a vowel. These comparisons, together with the correspondence which we have observed between the sonant dental and an original *dh* which afterwards became *h*, as in *idâ*, S. *iha*, seem to attach to the sign now before us the power of a sonant dental, differing from that of only so far as its association with the vowel *i* affected its articulation; for it is found only before that vowel, while, on the other hand, probably did not admit an *i* after it.

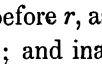
IV. The *labial-signs*, namely,

1. , 2. , 3. .

The first of these signs is the *p* of the Sanskrit and Zend, as: *upâ*, with, by, S. and Z. *upa*, id.; *puthra*, the son, (nom.) S. *putras* and Z. *puthrô*, id.; and *pitâ*, the father, (nom.) S.

* See Bopp's *Vergleichende Grammatik*, p. 650.

pitâ and Z. *pita*, id. The usage of this sign affords another illustration of the special affinity of the Achæmenidan Persian with the Zend; for, like the corresponding sign of the Zend alphabet, it stands, by a peculiar law of euphony, for the Sanskrit *w* after a palatal sibilant. We have, for example, the ground-form *â'spa*, both in our inscriptions and in the Zend language, as the correspondent of the Sanskrit *a'swa*. The *m* and the *b* of our cuneiform alphabet, however, interchange with the *p* put for the Sanskrit *w* after a palatal sibilant, as: *vi'sma* or *vi'spa*, all, S. *vi'swa* and Z. *vî'spa*, id.; and *â'sba*, which we have already seen, instead of *â'spa*, corresponding to the Sanskrit *a'swa*.

The second sign in this series denotes an aspirate of *p*. But its equivalent is not the Sanskrit *ph;* for, while there is no instance of its occurring as the correspondent of that letter, it clearly appears to have been put in the place of the Sanskrit *p* before *r*, as:  *ramânâ*, by the authority, S. *pramânêna*, id.; and inasmuch as the Zend language uniformly changed a Sanskrit *p* before *r* into *f*, we may conclude that the same principle of euphony was operative in the Achæmenidan Persian, and, therefore, that this sign substituted for a Sanskrit *p* before *r* in the orthography of the latter, was articulated as an *f*. It must be observed, however, that the *f* of the language of our inscriptions, may have extended beyond the limits of the law of euphony which required it in the place of *p* before *r;* for in the word *kaufa*, probably "a mountain," we have its sign before a vowel. Yet this is a solitary example, and we are ignorant of the derivation of the word. There was, also, a noticeable restriction upon the application of this euphonic law substituting *f* for *p*, in the language of our inscriptions, namely, that here, apparently, the semivowel *r* did not aspirate a preceding *p*, if followed by either *u*, or *i*. Nor is the ground of this restriction entirely hidden, since it may be reasonably conjectured that the liquid *r*, if followed by *u*, did not aspirate a preceding *p*, on account of that modification of its own power, whatever it was, which occasioned, as we shall see, the appropriation of a distinct sign to represent it, when coming before the vowel *u*. So, also, that a following *i* annulled the aspirating influence

of *r* upon a preceding *p*, may be referred to some modification of the power of *r*, in combination with the vowel *i;* for we have shown, in the case of the sonant palatal of the language of our inscriptions, that the vowel *i* could so alter the articulation of a preceding consonant as to require it to be expressed by a distinct sign.

The last of our labial-signs has for its correspondent in the Sanskrit, generally, the aspirate *bh*, as:  *âjim*, tribute, (acc.) from the root  *aj*, S. *bhaj*, to apportion; *â*  *iya*, to, S. *abhi*, id.; and  *umim*, the earth, (acc.) from  *umi*, S. *bhûmi*, the earth; but it sometimes stands for the Sanskrit *b*, as:  *adaka*, S. *bandha*. The comparison of Sanskrit words would, therefore, seem to authorize us to fix upon *bh* as the proper power of this sign, and to affirm that in the Persian cuneiform alphabet there is no distinct representative of the Sanskrit *b*. But there is a certain letter of the Zend alphabet, used precisely like our last cuneiform labial-sign, with respect to Sanskrit consonants, which Burnouf makes to be an unaspirated letter; and one of the grounds of this opinion, namely, that the Zend letter stands, also, for the Sanskrit *w*, which Burnouf regards as decisive of its not having denoted the aspirate *bh*, may be assumed as evidence, equally, of the value of the cuneiform sign now under consideration, since there is a word in which the latter, also, stands for the *w* of the Sanskrit alphabet, as: *â's*  *âraibish*, formed from *â's*  *a*, S. *a'swa*. We prefer, therefore, to give to this sign the value of the Sanskrit and Zend *b*, and to suppose, accordingly, that the Persian cuneiform alphabet has no distinct sign for *bh*.

V. The *nasal-signs*, namely,

1. , 2. , 3. , 4. , 5. .

It will be noticed that these are numerous; yet their variety has little analogy with the rich provision of signs, in the Sanskrit and Zend alphabets, to denote nasals of the different organs.

The first of these signs represents the Sanskrit and Zend *m*, as: *mâhyâ* for *mâhahyâ*, of the month, S. *mâsasya* and Z. *mâhanghê*, id. It seems not to have been clearly distinguished, however, as the sign of a labial nasal; for we find it used before a palatal consonant, in the compound *githâmtshâ* and the chaunting,* (acc.); before a guttural, in *âdam khshâyathiya*, I (am) the king; and before a dental, in *imâm dahyâum*, this province, (acc.); though in the two latter cases, as it is a final letter, the following guttural and dental are the initials of new words. But since the language of our inscriptions rejected terminal consonants, as a general rule, it appears not improbable that this cuneiform nasal-sign, at the end of words, where its occurrence is by far the most frequent, denotes only an indistinct nasalization of a preceding vowel; and that it is therefore admissible, without impropriety as regards euphony, before any consonant, even in the middle of words. According to this, its articulation as a final, and as a medial before a consonant, must have resembled what is called, in Sanskrit grammar, the proper *anuswâra*.

The second sign in our nasal-series denotes an uncertain modification of *m* before *i*, as appears from *bu*  *im*, the earth, (acc.) compared with *bu*  *âm*, id.; and from the orthography of the word  *thra*, O Mithra! which shows this sign to have been so intimately associated with the vowel *i*, that, even by itself, it could express the syllable *mi*.

Our third cuneiform nasal-sign is the *n* of the Sanskrit and Zend alphabets, as: *'stâna*, position, (nom.) S. *sthânas*, and Z. *'stânô*, id.; *naiya*, not, S. *nêt*, if not, and Z. *nôit*, not; and *âkunusha*, he made, where the syllable *nu* is equivalent to Sanskrit *nu* the distinctive mark of a certain conjugation of verbs. Its articulation seems, moreover, to have been recognized as partaking of the quality of a dental; for the fact of its being invariably elided in the orthography of the Achæmenidan Persian, where *n* occurs before a dental in the Sanskrit and Zend, as: *âtara*, within, S. *antar* and Z.

* This signification of *githâm* is the most plausible.

antarĕ, id., is only to be explained on the principle that of two consonants organically similar, coming together, one must be dropped in the pronunciation. The elision of *n* before the nasal *m* in the word *âkumâ*, we did, for *âkunmâ*, is to be referred to the same principle. This nasal-sign is never found at the end of a word.

The fourth sign in this series denotes *n* before *u*. It is not exclusively employed in combination with *u*, for the preceding sign is also used before that vowel. The peculiar articulation which it implies can not have belonged, therefore, to the language of our inscriptions, originally. Yet there is no doubt as to the real appropriation of this sign; for the only word in which it occurs, the preposition *ânu* in composition, or by itself *ânuva*, along, S. *anu*, id., compels us to regard it as having been appropriated to the representation of *n*, modified in its articulation by a following vowel *u*.

The last of our cuneiform nasal-signs remains to be identified. Of this there are only two examples, both occurring only at Behistûn, which are given us in the proper names *na*  *dita* and *dubâ* , or *dubâ*  *a*. It may reasonably be considered as representing some nasal akin to *n*, on account of its identity in form with the Median correspondent of the ordinary Persian cuneiform sign of *n*, in certain proper names. But in Persian cuneiform inscriptions, it is not lightly to be supposed equivalent to that Persian sign; for this would make it a mere superfluity. Probably, therefore, the value of the sign, as well as the sign itself, was introduced from a Median source. Now, Rawlinson informs us that, in the Median cuneiform orthography, this sign may be considered as denoting a complemental nasal, that is, a nasal appropriate to the end of a syllable. Such, then, was probably its use, in our cuneiform inscriptions. But what the precise value of it is, in the Median alphabet, remains uncertain; and so there is no ground for arguing from that, as to its value in the Persian. In view, however, of an inconsistency between the orthography and the actual pronunciation of the language of our inscriptions, which has been intimated, namely, that our cuneiform sign of *m* was allowed to stand before any con-

sonant, while yet, being a final, or preceding a consonant, it was not articulated as an *m*, it may perhaps be conjectured, that the sign now in question was introduced into the orthography of the Achæmenidan Persian, in order to indicate the indistinct nasalization which we suppose to have been sometimes given, inappropriately, to our cuneiform sign of *m*, and so to remove the inconsistency alluded to. We may remark, also, that the existence, in the Achæmenidan Persian, of an indistinct nasalization, to which there was no sign appropriated in its alphabet, originally, is perhaps indicated by the orthography of two proper names of our inscriptions, *zaraka* and *kabujiya*, compared with their Greek forms, Ζάραγγοι and Καμβύσης. For the latter contains nasals which are wanting in the former. But the suggestions here made need to be confirmed by the definite deciphering of the Median cuneiform alphabet. For, as has been said, the sign under consideration was probably used, in our inscriptions, with a Median value; which is the more likely, because the two proper names exemplifying it here, are neither of them Persian.

VI. The *semivowel-signs*, namely,

1.  or ,* 2. , 3. , 4. , 5. .

The first of these signs denotes the *y* of the Sanskrit and Zend, as: *yathâ*, S. and Z. *yathâ; yim*, whom, (masc.) Z. *yim* and S. *yam*, id.; and *yunâ*, the Ionians, (nom.) S. *yavanâs*, id.

The second represents the *r* of the Sanskrit and Zend alphabets, as: *âura*, the living one, S. *asura* and Z. *ahura*, id.; and *kariyishiyâmiya*, S. *kârayishyâmi*, I will cause to make, from the root *kar*, Z. *kĕrĕ*. An unaspirated surd consonant of either the guttural, the dental, or the labial class, preceding this semivowel, was made an aspirate by it, as: *tshakhriyâ*, *mithra*, and *framânâ*. But this law and the qualifications to which it was subject, have been already noticed in speaking of the several classes of consonant-signs affected by it; and we have also seen that there was an analogous principle in the Zend language.

* The latter form is found only at Behistûn, and is there exclusively employed.

The third sign in this series denotes some modification of *r* before *u*, as appears from *bâbi*  *ush*, Babylon, (nom.) compared with *bâbi*  *auva*, in Babylon. As to its articulation, more especially considered, the Greek forms *Βαβυλών* and *Κῦρος*, compared with their correspondents in our inscriptions, *bâbi-*  *ush* and *ku* *ush*, where this sign, representing *r* before *u*, stands for both the *λ* and the *ϱ* of the Greek, seem to indicate that its articulation vacillated between *l* and *r*.

The fourth sign in our series of semivowels, is the semivowel of *u*, of the Sanskrit and Zend. It stands for the Sanskrit semivowel of *u* in combination with a preceding consonant, which is the English *w*, as: *tu*  *am*, you, S. *twam*, id., as well as for that semivowel, when standing between two vowels, which is the English *v*, as: *na* *ama*, the ninth, (masc. nom.) S. *navamas*, id. But its articulation can not have varied after the manner of that of its Sanskrit correspondent. For it always required to have an *u* between itself and any consonant originally preceding, or, at least, its following a consonant immediately is contrary to rule in the orthography of our inscriptions. Of course, therefore, that articulation of the semivowel of *u* recognized in the Sanskrit, which depended upon its having a consonant immediately before it, can not have been established in the Achæmenidan Persian. On this ground, then, we might infer that, as the occasion for articulating the semivowel of *u* like the English *w* could not properly exist in the language of our inscriptions, our cuneiform sign of this semivowel must have been articulated like the English *v*. Its articulation, however, may not have been regulated by Sanskrit principles. We must see how it appears in the light of the Zend language. If, then, we compare words in which this sign occurs with their correspondents in the Zend, we find it standing alike for either of two forms of the semivowel of *u*, which in this language distinguish the articulation of the English *w* from that of the English *v*, as: *tu*  *am*, Z. *thwãm*, you, and *hu* *a*, he, Z. *hva*, self. But it is doubtful wheth-

er any of the occasions for giving the articulation of the English *w* to the semivowel of *u*, in the Zend, existed in the language of our inscriptions. The circumstance to which the pronunciation of the semivowel of *u* as equivalent to the English *w*, was most frequently owing in the Zend, namely, that a *th*, or *dh*, preceded, could not occur in the language of our inscriptions, consistently with its rule, as indicated by its orthography, to insert an *u* between its own semivowel of *u* and any preceding consonant. It may be added, that the representative of the English *w*, in the Zend, is much more rarely used than its fellow which denotes the English *v*. Thus we see that the principles of the Zend, so far as they can be applied, as well as those of the Sanskrit, point to the English *v* as the equivalent of our fourth cuneiform semivowel-sign.

The last sign in our semivowel-series, being sufficient of itself to represent the syllable *vi*, as: *tham*, the family, (acc.) from *vitha*, S. *vîja*, seed, was evidently appropriated to combination with the vowel *i*; and that it denoted some modification of *v* before that vowel, appears from the word *paru-iyata*, of old, an adverb in *ta*, S. *tas*, with the sense of the ablative singular, made out of a substantive which was derived from *paruva*, S. *pûrwa*, preceding, compared with *paru â*, the former, from this same ground-form. What modification of *v* the vowel *i* following may have occasioned, it is useless to conjecture, as we have no means of determining. This sign seems not to have been completely established in use; for we find examples of the ordinary form of *v*, even where the vowel *i* follows, as: *du ishtam*, to the remotest time, S. *davishtham*, very distant.

VII. The *sibilant-signs*, namely,

1. , 2. , 3. .

The first of this series represents an unaspirated surd sibilant, as: *uguda*,* Sogdiana, (nom.) S. participle '*Suktas*,

* The *u* of the second syllable is implied by the form of the *g*.

pure,* and the Zend proper name *'Sughdhô*, Sogdiana; and *â*  *tiya*, it is, S. *asti* and Z. *a'sti*, id. It took the place, as these examples show, of both the palatal *'s* and the dental *s* of the Sanskrit, and of the *'s* of the Zend; from which we may infer, in the absence of all opposing evidence, that the language of our inscriptions did not distinguish between the palatal *'s* and the dental *s* of the kindred languages. But this distinction, fully sustained in the Sanskrit, barely appears in the Zend; inasmuch as the palatal *'s* is found, to quote the words of Burnouf, to have "almost displaced the dental sibilant, in the usage of that language." The Achæmenidan Persian stood, therefore, in a much nearer relation to the Zend than to the Sanskrit, with respect to the employment of the power of this sign, and in view of the many analogies between the Zend and the language of our inscriptions, already pointed out, it seems most likely that the latter, in dispensing altogether with the distinction between a palatal and a dental sibilant, was deficient in the same way as the Zend, only to a greater degree. Consequently, the sign which stands in the Persian cuneiform orthography for both *'s* and *s* of the Sanskrit and Zend, may be considered as properly denoting the palatal *'s*. This conclusion is strengthened by an example of the elision of a following surd palatal of the Sanskrit, after the sibilant denoted by this sign, as: *pa'sâva*, afterwards, S. *pa'stshât*, id., which would seem to depend upon the principle that two consonants organically similar might not immediately follow one another. Another consideration favoring our identification of this sign, is that, like the palatal *'s* of the Zend, it is found sometimes to stand for the hard palatal *tsh* of the Sanskrit alphabet, as: *ra's* in *âra'sam*, I came, S. *rĭtsh*, to go; and *para's* in *âpara'sam*, I took in hand, S. *prĭtsh*, to handle, which in Zend has the form *pĕrĕ's*.

The second of our cuneiform sibilant-signs denotes the aspirated surd *sh* of the Sanskrit and Zend. Its power is proved by the following specifications of its usage:

1. It is used as the correspondent of an original *sh* of those languages, as: *âisha*, he went, from the root *ish*, S. *ish*, to go; and *âdarshanusha*, he dared, from the root *darsh*, S. *dhrĭsh* and Z. *dĕrĕsh*, to dare.

* See Burnouf's *Comment. sur le Yaçna*, Notes, p. 56.

2. It stands for the *sh* of the Sanskrit, put in the place of an unaspirated sibilant, as: *mathishta*, the greatest, from *matha*, S. *mahat*, with the superlative suffix *ishta*, S. *ishtha*, put for *istha* according to a general law, that the dental *s*, being a medial, after any other vowel than *a*, or *â*, and followed by *t*, or *th*, should become *sh*. The language of our inscriptions dispensed with the aspiration of the dental of the Sanskrit *ishtha*, while it took that of the sibilant; thus standing mid-way between the Sanskrit and the Zend, for the Zend form of this word is *mazista*.

3. It is used euphonically, for an unaspirated sibilant of the Sanskrit, or Zend, on principles which are recognizable, wholly or partially, in the former of these languages. Thus, in the word *hushiya*, compounded of *hu*, S. *su*, and *ushiya*, from *usha*, S. *va'sa*, as well as in the word *dushiyâram*, compounded of *dush*, bad, S. *dus*, id., and *yâram* from *yâra*, year, Z. *yârĕ*, id., the *sh*, substituted in the one case for the palatal sibilant, and in the other for the dental, of the Sanskrit, which the language of our inscriptions did not distinguish, may be explained by the Sanskrit law, that the dental *s*, after any other vowel than *a*, or *â*, and followed by a vowel, or by *y*, should become *sh*. The same law will also account for the aspirated sibilant of the word *vashnâ*, by the will, if we only suppose this word to be a contraction from *ushanâ*, from *usha*, a ground-form which we have already met with in the compound *hushiya*, with a nasal inserted between its final vowel and the sign of the instrumental case. The corresponding Zend word *va'snâ* may have been likewise contracted from *u'sana*. So, the proper name *vishtâ'spa*, Hystaspes, Z. *vîstâ'spa*, from which comes the genitive singular *vishtâ'spahyâ*, may be supposed to owe its aspirated sibilant to the law of the Sanskrit already referred to, which gave to the superlative suffix of that language the form *ishtha*. Again, a final *s* of the Sanskrit having its correspondent in the orthography of our inscriptions, after the vowels *u* and *i*, as: *dârayavush* and *shiyâtish*, nominatives singular from *dârayavu* and *shiyâti*, while after *a*, or *â*, it is elided, as: *âuramazdâ* and *ârmina*, which are also nominatives singular, from *âuramazdâ* and *ârmina*, that Sanskrit dental sibilant has evidently been replaced by *sh*.

4. It is used euphonically, for a *t*, as: *âniyashtshiya*, any other thing, compounded of *âniyash* for *âniyat*, other thing, S. *anyat*, id., and *tshiya*, any, S. *tshi* in *tshit*,-soever; and *âvashtshiya*, that whatever it is, compounded of *âvash* for *âvat*, that, Z. *aom*, id., and *tshiya*. Here it seems to be the palatal *tsh*, following the dental *t*, which has softened it into *sh*, on a scale of euphonic change through which *t* is naturally prone to pass, namely, *t—tsh—sh*. The transition of the dental could not have stopped, here, at *tsh*, because the language of our inscriptions allowed no two consonants organically similar to come together, without an intervening vowel.

Our third cuneiform sibilant-sign has the value of the unaspirated sonant *z* of the Zend alphabet. This is argued from its being put in the place of the Sanskrit *h*, or *j*, in words where the Zend puts *z*, as: *maz*, great, in *âuramazdâ*, Z. *maz* and S. *mahat*, id.; and *zanânâm*, of people, from the root *zan*, Z. *zan* and S. *jan*, to engender, to be born. The close relationship between the powers of the Zend alphabet and our cuneiform, generally, which has been proved to exist, may be considered as authorizing such a mode of argument. But the laws which regulated the substitution of this *z* of the language of our inscriptions, for *h* and *j* of the Sanskrit, have not been clearly defined.

VIII. The *aspirate-sign*, namely,



This has the value of the *h* of the Zend alphabet. It sometimes corresponds, indeed, to the Sanskrit *h*, as: *âmahya*, we were, S. *âsmahi*,* id., and so does the *h* of the Zend. But it is chiefly used, like the Zend *h*, in the place of the dental sibilant of the Sanskrit; and the laws of the language of our inscriptions, by which this substitution appears to have been regulated, entirely coincide with rules of the Zend, requiring the substitution of *h* for that Sanskrit consonant. Thus, the dental sibilant of the Sanskrit, at the beginning of a word, and followed by a vowel, or by the semivowel *y*, is replaced by this cuneiform sign, as: *haruva*, all, (masc.

* Comp. *âmahi*, first pers. plur. of that form of the imperfect of the substantive verb *as* which was attached to roots in the Sanskrit, to make one of its aorists: see Bopp's *Gramm. Critica*, p. 182.

nom. sing.) S. *sarwas*, id., which, by the same law, is *haurvô* in the Zend; and *hya*, he who, Vêdic S. *syas*, this, (masc. nom.) and Z. *hya* in *hyat*, that which. So, in the middle of a word, preceded by the vowel *â*, or *a*, and followed by another vowel, or by the semivowel *y*, the dental sibilant of the Sanskrit is replaced by the same sign, as: *âha*, it has been, it was, S. *âsa*, id., which, by the same law, is *âongha* in the Zend; and *âhyâyâ*, S. *asyâs* and Z. *anghâo* or *ainghâo*. These laws cover all the cases in which the cuneiform sign, now under consideration, stands for the Sanskrit dental sibilant; and both of them being operative in the Zend, with respect to the substitution of the *h* of that language for the Sanskrit *s*, we are fully justified in giving to the sign before us the value of the Zend *h*. Yet it must have had a weaker articulation than the *h* of the Zend; for it is sometimes elided where the Zend retains its *h*, as: *âura*, Z. *ahura;* and *uvaja*, Susiana, Z. *hvaja* or *hvaza*, as presupposed in the modern Persian proper names *Ahwâz* and *Khûzistân*. Nor is it ever hardened into a guttural, like the Zend *h* in such examples as *daqyu* corresponding to S. *dasyu*.

We have now to identify a few signs, employed in our inscriptions, which require to be classed by themselves as compounds, and are purely orthographic, namely,

1. , 2. , 3.  or , 4.  or .*

The first of these signs probably represents the compound articulation *rp*. It occurs in only one word, used as a royal title; and by calling it *rp* we obtain the word *narpa*, an exact equivalent, according to rule in the Achæmenidan Persian, for the common Sanskrit epithet of a king, *nṛ̆pas*. Besides, what is more, this Sanskrit word appears, as it is said, in the Median transcripts of our inscriptions, under the form of *narap*, not only in the passages corresponding to those where *narpa* may be read on the Persian cuneiform tablets, but also in all passages where the title of king is required. Nor does there seem to be any objection to sup-

* The first of the equivalent forms of this series is Rich's copy; the second, that of Westergaard.

posing that the Achæmenides introduced a title for king into their own language from the Median. It can not have become fully incorporated, however, into the Achæmenidan Persian, since we find it used in only two or three instances, in our inscriptions; and this accounts for what Rawlinson considers strange, and favorable to another identification of the sign before us, that there are no traces of the word *narpa*, "either in the construction of (Persian) proper names, or in the vocabulary of the modern language." But Rawlinson certainly errs in the principle which he lays down, in treating of this sign, "that the expression of two consonants by a single letter is altogether opposed to the simplicity of primitive cuneiform orthography." This will appear presently.

The second sign, classed as a compound, unquestionably represents the double articulation *thr;* for it has precisely the same orthographic value in the word *pu*  *a*, S. *putras*, for example, which the separate signs for *thr*, , have in the proper name *mithra*, S. *mitra*, both modes of orthography being substitutes for the Sanskrit *tr*. This sign is exclusively used to denote *thr*, in our inscriptions, excepting the very latest of them, a monument of Artaxerxes Ochus, where the equivalent separate signs are also employed to represent the same double articulation; which proves that what Rawlinson would regard as a more primitive orthography, was in fact, in this case, the latest to come into use.

The remaining two of our compound signs represent, respectively, the syllable *dah* in the words *dahyunâm*, of the provinces, and *dahyum*, the province, (acc.) and the combined syllables *bumi* in the word *bumiyâ*, of the earth. These were undoubtedly introduced at a late period, for we find them only in the examples given, which are both taken from an inscription of Artaxerxes Ochus; and they must have originated under an orthographic system radically different from that exemplified in our inscriptions.

In the course of the foregoing observations the powers of the Persian cuneiform, Sanskrit and Zend alphabets have been continually brought into comparison. The results thus

obtained it may, now, be interesting to review. We therefore present the following table, which shows, first, what powers were common to all these alphabets; next, the coincidences, with respect to its powers, between the Persian cuneiform and each one, in particular, of the other two; next, what the Persian cuneiform had which was peculiar to itself; and lastly, what each of the other two had, which was wanting to the Persian cuneiform.

1. Common to the Persian cuneiform, Sanskrit and Zend alphabets:
 â; i; u; k; kh; g; tsh; j; t; d; p; b; m; n; y; r; v; 's; sh.
2. Common to the Persian cuneiform and the Sanskrit:
 anuswâra, which we may represent by *ṅ;* but this is doubtful.
3. Common to the Persian cuneiform and the Zend:
 th; f; z; h.
4. Peculiar to the Persian cuneiform:
 k before *u;* a peculiar surd guttural before *u;** *g* before *u; j* before *i; t* before *u; d* before *u; d* before *i; m* before *i; n* before *u; r* before *u; v* before *i.*
5. Belonging to the Sanskrit, and not to the Persian cuneiform:
 a; î; û; rĭ; rî; lrĭ; lrî; ê (*a*+*i*); *ô* (*a*+*u*) diphth. *âi;* diphth. *âu; visarga; gh; ng; tshh; jh:* palatal *ñ;* all the linguals; *th; dh; ph; bh; l; w; s; h; lra.*
5. Belonging to the Zend, and not to the Persian cuneiform:
 a; î; û; ĕ; è; ê (*a*+*i*); *o* or *ô* (*a*+*u*); *âo; ã;* diphth. *âi;* diphth. *âu; q; gh; ng; zh* (softer than *j*); palatal *ñ; dh; w; s.*†

There are certain phonetic elements, namely, *a*, *î* and *û*, which, though not represented in the Persian cuneiform

* Lassen represents it by *ch*, and we have accordingly adopted the orthography *chudra* and *chudrá*, above. But of course we have no means of defining the peculiarity of this guttural.

† Several of these powers of the Zend alphabet may require more explanation. Z. *ĕ* and *è* were modifications of *a*, regarded as simple sounds, rather than proper diphthongs. Z. *âo* was a peculiar compound sound, substituted for terminal *âs* of the Sanskrit. Z. *ã* had the sound of *a* nasalized by an *n* following it. This and *ñ* were sometimes used for the Sanskrit *anuswâra*. The *âi* and *âu* of the Zend were expressed by the separate signs of *â* and *i*, or *u;* but we have sufficient reason to believe that they were recognized as diphthongs, because the Zend alphabet plainly distinguishes the diphthongs *a*+*i* and *a*+*u*.

alphabet, without doubt belonged to the language of our inscriptions. But the alphabet of a language may be assumed as an index, in general, of its phonetic development. From this tabular view of the relations of the Persian cuneiform, Sanskrit and Zend alphabets to one another, we may, therefore, draw the following inferences.

1. That most of the vowel-sounds and articulations of the language of our inscriptions were common to it with the Sanskrit and Zend.

2. That the language of our inscriptions, in its phonetic elements, agreed with the Zend, rather than with the Sanskrit, and generally, where these differed from each other.

3. That the phonetic peculiarities of the language of our inscriptions arose chiefly from its recognizing different articulations as belonging to the same consonant, according to the vowel which followed;* but it had one articulation which does not appear, at all, in the Sanskrit and Zend alphabets.

4. That the natural development, phonetically, of the language of our inscriptions, was less complete than either that of the Sanskrit, or that of the Zend, inasmuch as it confounded vowel-sounds and articulations which in those languages were distinguished, while many of the phonetic elements of the Sanskrit and the Zend can not be shown to have belonged, at all, to the language of our inscriptions. The fact that the language of our inscriptions recognized different articulations of the same consonant, determined by the following vowel, as it has no analogy in either the Sanskrit or the Zend, is to be referred to some foreign influence, and not to the natural phonetic development of this language.

* It has been suggested that the association of particular forms of consonants, belonging to this alphabet, with certain vowels, is to be regarded as "the remains of an original syllabic system of writing;" see the *Allgemeine Literatur-Zeitung* for November, 1847, p. 854. But there are objections to this view. For, in the first place, the instances are very few in which one and the same sign appears to have stood for a consonant and its vowel, unless the latter was short *a*. Then, again, the separate expression of *i*, or *u*, by its own sign, after signs which, according to this view, originally denoted the combination of one of those vowels with certain consonants, shows that, in the Persian cuneiform orthography, as it now lies before us, these signs were not recognized as syllabic. The few cases in which a single sign occurs with the double value of a consonant and the vowel *i*, or *u*, following it, are sufficiently explained on the supposition that the sign was properly alphabetical, but, by the force of association with one of those vowels, came to be used to denote the vowel as well as the articulation depending upon it.

The language of our inscriptions may therefore be briefly described, with respect to its phonetic elements, as a language belonging to the family of the Sanskrit and the Zend, the so-called Arian family, but more akin to the Zend than to the Sanskrit, though more antique than either.

Were it our intention, at the present time, to consider the Persian cuneiform inscriptions from every point of view, we should now proceed to analyze them, with special reference to the grammatical forms of the language which they reveal to us. The tablets of Persepolis and its vicinity have been somewhat variously interpreted; and there is still room for suggestions with respect to the meaning of particular passages in them, as well as in the inscription of Behistûn, of which Rawlinson alone has as yet published an interpretation, if we except the small pamphlet by Benfey. But we can not here extend our investigations so far. Yet it seems desirable to give an analysis of one of the inscriptions, word by word, in order that some things which have been noticed in the foregoing discussion, may be seen in a clearer light, or farther impressed upon the mind, and that the views with respect to the values of the signs of the Persian cuneiform alphabet, generally, at which we have arrived, may be proved capable of application to the unlocking of these venerable and interesting records.

The inscription which we have selected for analysis, particularly adapts itself to our purpose. It is a memorial of Xerxes, the son of Darius, found at Persepolis. A very accurate copy of it has been obtained, through the Danish scholar Westergaard, by his collating with the original a copy which Niebuhr made; and it has been more studied than perhaps any other of the series, while at the same time its contents are simple. It is sculptured on one side of the first flight of steps leading up to the second grand portico of entrance to the palaces of Persepolis, at *d* in Niebuhr's ground-plan of the ruins. A procession of men, apparently bearing presents, appears in bas-relief along side of it, divided into rows, longer or shorter as the ascent of the steps allowed room. It reads thus:

baga . vazarka . âuramazdâ
. hya . imâm . bumim .

âdâ . hya . âvam . â'smâ
nam . âdâ . hya . martiya
m . âdâ . hya . shiyâti
m . âdâ . martiyahyâ .
hya . khshayârshâm* . khshâ
yathiyam . âkunusha . âi
vam . parunâm . khshâyath
iyam . âivam . parunâm
. framâtâram . âdam . kh
shayârshâ . khshâyathiya
. vazarka . khshâyathiya . khsh
âyathiyânâm . khshâyath
iya . dahyunâm . paruvaza
nânâm . khshâyathiya .
âhiyâyâ . bumiyâ . va
zarkâyâ . duriya . â
piya . dârayavahush . khsh
âyathiyahyâ . puthra . hakh
âmanishya . thâtiya . kh
shayârshâ . khshâyathiya . va
zarka . taya† . manâ . kartam
. idâ . utâ . tayamaiya .
âpataram . kartam . âva . v
i'sma . vashnâ . âuramazdâ
ha . âkunavam . mâm . âura
mazdâ . pâduva . hadâ . ba
gaibish . utâmaiya . khshathra
m . utâ . tayamaiya . kartam .

Respecting this transcription, it is only necessary to observe, that the dot, separating each word from the next, represents an arrow-head so placed, as a punctuation-mark, in the original. This has its equivalent, in the orthography of the Zend language, in a dot placed between each two words.

The following is a literal translation, made, as far as possible, line for line. There is some uncertainty, however, re-

* This reading is to be preferred to *khshyârshâm*, and so *dârayavahush*, below; to *dâryavahush*, on account of the repugnance of *y*, in the language of our inscriptions, to following a consonant. See *Allgem. Lit.-Zeit.* for 1847, p. 865.

† We are obliged to read *taya* for S. *tyat*, in our inscriptions, on account of the euphonic laws, here exemplified, respecting the separation of *y* from a preceding consonant, and the aspirating influence of *y* upon a *t* which it followed.

specting the syntax; for as to the relative collocation of adjectives and the substantives with which they agree, and of genitives and substantives the signification of which they limit, and some other points of syntax, no very definite rules have been discovered, as yet, in the Achæmenidan Persian.

The great divinity Ormuzd
(is) he who this earth
made, (is) he who that sky
made, (is) he who mankind
made, (is) he who the support
made of mankind,
(is) he who Xerxes the king
created, sole
of many (people) the king,
sole of many (people)
the sovereign. I (am) Xerxes the king,
the great king, of kings
the king,
of provinces populous
the king,
of this great earth
the commissioned upholder even,
of Darius the king
the son, an Achæmenide.
Says Xerxes
the great king:
that which of me (is) done
here, also that which of me
elsewhere (is) done, all that
by the will of Ormuzd
I did . Me, O Ormuzd!
do you protect, with the deities,
also of me the royal power,
also that which of me (is) done.

According to the foregoing translation, the separate words of this inscription are to be explained as follows:

baga, "The divinity," masc. nom. sing., the sign of the case, a final *s*, being elided, the subject of "is" understood; comp. S. *bhaga* in the title *bhagavat*, the holy, the blessed one.

vazarka, "great," masc. nom. sing., agreeing with *baga;* comp. mod. Pers. *buzurg.*

âuramazdâ, "Ormuzd," masc. nom. sing., in apposition with *baga*, from *âuramazdâ*, compounded of *âura*, S. *asura*, the life-giving, the living one, and *mazdâ*, possessing great intelligence, which is itself a compound of *maz*, great, and the root *dâ*, to know; comp. Z. *ahuramazdâo.*

hya, "he who," masc. nom. sing., including a relative pronoun which is the subject of *âdâ* below, from *hya*, compounded of *ha*, he, and *ya*, who; comp. Vêdic S. *syas*, this, from *sya*, compounded of *sa* and *ya*.

imâm, "this," fem. acc. sing., agreeing with *bumim* below; comp. S. *imâm* and Z. *imãm.*

bumim, "earth," fem. acc. sing., the direct object of *âdâ* below, from *bumi;* comp. S. *bhûmim.*

âdâ, "made," third pers. sing. of an aorist, formed with the augment *â* from the root *dâ*, the sign of the person, a final *t*, being elided; comp. S. *adhât*, from the root *dhâ*, to set, to place, and also the Zend root *dâ*, to create.—*hya*, "he who," as above, including the subject of *âdâ* below.

âvam, "that," masc. acc. sing., agreeing with *â'smânam* below, from *âva;* comp. Z. *aom*, contracted from *avam*, and S. *ôm*, a title of the Supreme Brahma.

â'smânam, "sky," masc. acc. sing., the direct object of *âdâ* below, from *â'smâna;* comp. Z. *a'smaněm.*—*âdâ*, "made," as above.—*hya*, "he who," as above, including the subject of *âdâ* below.

martiyam, "mankind," probably neut. acc. sing., the direct object of *âdâ* below, from *martiya;* comp. S. *martyam.* —*âdâ*, "made," as above.—*hya*, "he who," as above, including the subject of *âdâ* below.

shiyâtim, "the support," probably fem. acc. sing., the direct object of *âdâ* below, from *shiyâti;* comp. the Zend ground-form *jyâiti*, the means of living, from the root *jyâ*, S. *jîv*, to live.—*âdâ*, "made," as above.

martiyahyâ, "of mankind," gen. sing., limiting *shiyâtim*, from *martiya;* comp. S. *martyasya*, and the Zend sign of the genitive *hyâ* in *thwahyâ*, of you. In the word *âurahya*, occurring in one of our inscriptions, we find the sign of the

genitive with the final short *a* of the Sanskrit.—*hya*, "he who," as above, including the subject of *âkunusha* below.

khshayârshâm, "Xerxes," acc. sing., the direct object of *âkunusha* below, from *khshayârshâ*, probably compounded of *khshaya*, royal, from *khshi*, and *ârshâ*, devout, S. *ârsha*, the final *a* of the Sanskrit being lengthened into *â*.

khshâyathiyam, "the king," acc. sing., in apposition with *khshayârshâm*, from *khshâyathiya*, formed from *khshâya*, royalty, with the suffix *thiya*.

âkunusha, "created," third pers. sing. of an aorist, formed with the augment *â* and the auxiliary affix *sha* for *shat*, S. *sat*, from the root *ku* substituted for *kar*, with the conjugational sign *nu*; comp. the Sanskrit root *kur* for *krĭ*, and mod. Pers. *kun*, to make. In the same tense of the Sanskrit the conjugational sign did not appear.

âivam, "sole," masc. acc. sing., agreeing with *khshâyathiyam* below, from *âiva*; comp. Z. *aêva*, where the *a* of *aê* simply marks *ê* as the compound of *a*+*i*.

parunâm, "of many (people,)" gen. plur., limiting *khshâyathiyam* below, from *paru*; comp. S. *purûnâm*.—*khshâyathiyam*, "the king," as above, in apposition with *khshayârshâm*.—*âivam*, "sole," as above, agreeing with *framâtâram* below.—*parunâm*, "of many (people,)" as above, limiting *framâtâram* below.

framâtâram, "the sovereign," masc. acc. sing., in apposition with *khshayârshâm*, from *framâtar*, formed from the root *framâ*, with the suffix *tar*; comp. S. *framâtâram* and Z. *framâtârĕm*, the regulator.

âdam, "I," the subject of "am" understood; comp. S. *aham* and Z. *azĕm*. A comparison of this pronoun with the nom. sing. of the pronoun of the first person in the Sanskrit, shows that the original form of both was *adham*, of which the Sanskrit preserved the aspiration alone, while the language of our inscriptions retained the dental, unaspirated. The *z* of the Zend *azĕm* exemplifies a common phenomenon in language, the transition of an original dental into a sibilant.

khshayârshâ, "Xerxes," nom. sing., from *khshayârshâ*.

khshâyathiya, "the king," nom. sing., in apposition with *khshayârshâ*, from *khshâyathiya*.—*vazarka*, "great," as

above, agreeing with *khshâyathiya* below.—*khshâyathiya*, "the king," as above, in apposition with *khshayârshâ*.

khshâyathiyânâm, "of kings," gen. plur., limiting *khshâyathiya* below, from *khshâyathiya;* comp. S. *ânâm* the sign of the gen. plur. from ground-forms in *a*.—*khshâyathiya*, "the king," as above, in apposition with *khshayârshâ*.

dahyunâm, "of provinces," fem. gen. plur., limiting *khshâyathiya* below, from *dahyu;* comp. S. *dasyûnâm*.

paruvazanânâm, "populous," fem. gen. plur., agreeing with *dahyunâm*, from *paruvazanâ*, compounded of *paruva* for *paru*, many, and *zana*, people, with the sign of the fem. gen. In the former part of this compound, the *u* of *paru* is treated like a final vowel, and *paruvazanânâm* is merely a union in form of two words which are several times separated, in the orthography of our inscriptions, thus: *paruva. zanânâm.*, while yet the sense requires them to be taken together as making a compound. The strictly proper orthography *paruzanânâm* also occurs.—*khshâyathiya*, "the king," as above, in apposition with *khshayârshâ*.

âhiyâyâ, "of this," fem. gen. sing., agreeing with *bumiyâ* below, from *âhiyâ*, compounded of *â* + *hiyâ;* comp. S. *asyâs*, where the sign of the case, *âs*, is attached to the original ground-form, while *âhiyâyâ* is formed like the gen. sing. from a feminine ground-form in *â* of the Sanskrit, not pronominal, the final *â* of the ground-form becoming *âi*, and consequently *ây*, before *â* for S. *âs*.

bumiyâ, "earth," fem. gen. sing., limiting *duriya* below, from *bumi;* comp. S. *bhûmyâs;* but the *y* here not being original, we must regard the *iy* of *bumiyâ* as standing for *i* before the sign of the case, and not for S. *y* after a consonant.

vazarkâyâ, "great," fem. gen. sing., agreeing with *bumiyâ*, from *vazarkâ*, formed like *âhiyâyâ* from *âhiyâ*.

duriya, "the commissioned upholder," masc. nom. sing., in apposition with *khshayârshâ;* comp. S. *dhuryas*, a bearer of burthens, a sovereign's minister. Xerxes here claims to be the vicegerent of Ormuzd.

âpiya, "even;" comp. S. *api*.

dârayavahush, "of Darius," gen. sing., limiting *puthra* below, from *dârayavu;* comp. with *ahush*, the ending of the genitive from masculine ground-forms in *u* of the Sanskrit, namely *ôs*, which consists of the sign of the case, *s*, affixed

to the final vowel of the ground-form, with *a* before it; but in *ahush* for S. *ôs*, we have the vowels *a* and *u* joined together by an aspirate inserted between them, which accords with the view already expressed, that proper diphthongs were unknown in the language of our inscriptions.

khshâyathiyahyâ, "the king," gen. sing. in apposition with *dârayavahush*, from *khshâyathiya*, formed like *martiyahyâ* from *martiya*.

puthra, "the son," nom. sing., in apposition with *khshayârshâ;* comp. S. *putras* and Z. *puthrô*.

hakhâmanishiya, "an Achæmenide," masc. nom. sing., in apposition with *khshayârshâ*, from *hakhâmanishiya*, a patronymic formed with the suffix *ya* from *hakhâmanish*, which may be resolved into *hakhâ*, S. *sakhâ*, a friend, and *manish*, S. *manas*, mind, signifying, as compounded together, "the friendly minded."

thâtiya, "says," third pers. sing. of the present, the predicate of *khshayârshâ* below, from the root *thas* with the conjugational sign *a*, making *thaha*, *thâtiya* being a contraction from *thahatiya;* comp. S. *'sansati.—khshayârshâ*, "Xerxes," as above.—*khshâyathiya*, "the king," as above, in apposition with *khshayârshâ.—vazarka*, "great," as above, agreeing with *khshâyathiya*.

taya, "that which," neut. nom. sing., the sign of the case, a final *t*, being elided, including a relative pronoun which is the subject of "is" understood, from *taya*, compounded of *ta*, that, and *ya*, which; comp. Vêdic S. *tyat*, that.

manâ, "of me, i. e. by me," gen. of the instrument, limiting *kartam* below, from *âdam;* comp. S. *mama* and Z. *mana*.

kartam, "done," neut. nom. sing., agreeing with the relative pronoun included in *taya*, from the perfect passive participle *karta;* comp. S. *kartam* and Z. *kĕrĕtĕm*.

idâ, "here," an adverb qualifying *kartam;* comp. S. *iha* and Z. *idha*.

utâ, "also," a conjunction connecting *taya kartam idâ* with *taya âpataram kartam* below; comp. Vêdic S. and Z. *uta*.

tayamaiya, "that which of me, i. e. by me," *taya*, "that which," as above, and *maiya*, "of me," a form of the gen. sing. of the pronoun of the first person, limiting *kartam* be-

low; comp. S. *mê* for *mama*. A final *t* of the former of the two words here united is elided, as if the word stood by itself.

âpataram, "elsewhere," an adverb qualifying *kartam* below, originally a neut. acc. sing., from *âpatara*, an adjective formed from the preposition *âpa*, away, with the suffix *tara*; comp. S. *uttara*, superior, from the preposition *ut*, above, and S. *apara* for *apatara*, other, from *apa*.—*kartam*, "done," as above.

âva, "that," neut. acc. sing., the sign of the case, a final *t*, being elided, in apposition with the demonstrative pronoun included in *taya*, the direct object of *âkunavam* below.

vî'sma, "all," neut. acc. sing., agreeing with *âva*, from *vî'sma*; comp. S. *vî'swam*; but *vî'sma* was declined like a pronoun, taking *t* instead of *m* for the sign of its nom. and acc.

vashnâ, "by the will," masc. or neut. instrum. sing., used adverbially to qualify *âkunavam* below, probably contracted from *ushanâ*, from *usha*; comp. S. *va'sêna*.

âuramazdâha, "of Ormuzd," gen. sing., limiting *vashnâ*, from *âuramazdâ*; comp. with *âha*, the ending of the genitive from masculine ground-forms in *â* of the Sanskrit, *as*, final long *â* being thrown off before the sign of the case *as*; but in *âha* for S. *as*, we have the final long *â* of the ground-form retained, and an *a* added after the sign of the case, to preserve its final consonant, and thus distinguish the genitive from the nominative.

âkunavam, "I did," first pers. sing. of the imperfect, formed with the augment *â* from the root *ku*, substituted for *kar*, with the conjugational sign *nu*, which before the sign of the person, *am*, became *nau* and consequently *nav*; comp. Vêdic S. *akṛiṇavam*.

mâm, "me," acc., the direct object of *pâduva* below, from *âdam*; comp. S. *mâm* and Z. *mãm*.

âuramazdâ, "O Ormuzd!" voc. sing., of the same form as the nom. above.

pâduva, "do you protect," second pers. sing. of the imperative, from the root *pâd*, the ending *uva* being contracted from *ahuva*; comp. S. *aswa*, the ending of the second pers. sing. of the imperative in the Sanskrit, from verbs which have the conjugational sign *a*; comp. also the root *pâd* with S. and Z. *pâ*, to which a dental has been affixed after the analogy

of Zend *dh* and *th* affixed to Sanskrit roots in *â;* but in the language of our inscriptions *d* was sometimes affixed also to roots ending in *ar* for S. *rĭ*, as: *barduva*, do you bring, from *bar*, S. *bhrĭ*. The elision of the *a* before *h*, together with that aspirate, in *uva* for *ahuva*, seems to imply the avoiding of a hiatus between *a* and a following *u*.

hadâ, "with," a preposition connected with *bagaibish* below; comp. Vêdic S. *sadha*, S. *saha*, and Z. *hadha*.

bagaibish, "the deities," instrum. plur. from *baga;* comp. with *aibish*, the ending of the instrum. plur. from ground-forms in *a* of the Vêdic S., *êbhis;* both of these endings exhibit the Zend characteristic of the epenthesis of *i*, reflected back, as it were, from a following syllable. Ormuzd is here regarded as having other deities associated with him in his actions.

utâmaiya, "also, of me, i. e. my" *utâ*, "also," as above, and *maiya*, "of me," as above, limiting *khshathram* below; in the former of the two words here united we have a final *a* of the Sanskrit and Zend lengthened, as if the word stood by itself.

khshathram, "the royal power," neut. acc. sing., the direct object of *pâduva* understood, from *khshathra;* comp. S. *kshatram* and Z. *khshathrĕm;* but the same word in the Sanskrit and Zend was used in the concrete, to signify "king."—*utâ*, "also," as above.—*tayamaiya*, "that which of me, i. e. by me," as above.—*kartam*, "done," as above.

The grammatical forms of the language of our inscriptions, to which the foregoing analysis may serve as an introduction, and the contents of these inscriptions, will probably form the subject of another article in this Journal. One of the tablets of Persepolis, and that at Nakshi-Rustam, in the vicinity of the ancient residence of the Persian kings, each gives us a list of the names of the tributaries of Darius which is of much historical interest; while the great inscription of Behistûn, of four hundred and two lines more or less legible, is of still higher interest, being a summary of unquestionable authenticity, of the most important events which distinguished the reign of Darius the son of Hystaspes, or marked the period immediately preceding his accession